

sellated epithelium, but corresponding more to what Mr. Goodsir has termed *germinal membrane*. From all these facts the author concludes that the proper office of this structure is to secrete synovia; an office which Clopton Havers had assigned to them as long ago as the year 1691, although his opinion has not been generally adopted by later physiologists.

“Description of a Process for extracting the Palladium which exists in combination with the Gold of the Gongoscho and other Mines in the Brazils.” By Percival N. Johnson, Esq., in a letter to the President, by whom it is communicated to the Society.

The process consists in melting the gold, obtained from its matrix by the ordinary processes of stamping and washing, with three times its weight of silver, granulating it in cold water, and refining it by the process of quartation, or separation of its alloys by nitric acid. The nitric solution contains the silver, palladium, copper, and a small proportion of iron and lead.

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May 14, 1846.

The MARQUIS OF NORTHAMPTON, President, in the Chair.

Contributions to Terrestrial Magnetism. No. VII. By Lieut.-Colonel Sabine, R.A., For. Sec. R.S.

From the discovery which was made of the non-coincidence of the locality of the maximum magnetic intensity, within the Arctic circle, with that in which the magnetic direction is vertical, it followed that the generally prevailing opinions respecting the distribution of magnetic force at the surface of the earth were erroneous, and that even the broad outline of the picture of terrestrial magnetism required to be recast. For the purpose of obtaining sufficiently copious and accurate materials, by means of which so desirable an object could be accomplished, the British Association for the Advancement of Science requested, in the year 1835, a report to be prepared, in which the state of our knowledge, collected from a great variety of sources, with regard to the variations of the magnetic force at different parts of the earth's surface, should be reviewed, and properly discussed, and suggestions offered as to the best means of extending the inquiry. In the report so obtained, it was recommended that magnetic surveys of that portion of the North American Continent, which is comprised within certain isodynamic lines, should be procured. The present paper contains the results of an expedition towards the accomplishment of this object, recommended by the President and Council of the Royal Society to be undertaken under the auspices and with the assistance of the Hudson's Bay Company. Lieutenant Lefroy, of the Royal Artillery, who had received an appointment to the Toronto Observatory,